



Claims

1. System for displaying music score in electronic display device, including:

first data memory, which holds base data to be transformed into images of music score of a music piece, and

second data memory, which holds detailed tempo data representing duration time of every beats or its subdivision, called tick or clock, along all through said music piece,

also having:

first function, which autonomously advances internal music time by reading out consecutive duration time from the second data memory and measuring the duration time, wherein music time means an expression specifying playing position in the music piece including but not limited to 3-tuple number of measure, beat and tick or clock,

second function, which sets up partition of display space and generates image for each partition of each page using data in the first data memory,

third function, which renews display image at a partition of the second function when the internal music time of the first function reaches value preset for each partition,

and fourth function, which corrects difference between internal music time and actual performing music time by using timing input derived from performance.

2. The system as claimed in claim 1, wherein at the third function the music time value for renewal of the partition, named renewing partition, is preset to the music time corresponding to note or rest displayed at position inside a partition, named playing partition, apart with enough distance in both forward and backward direction from the renewing partition.

3. The system as claimed in claim 1, wherein the fourth function has multi level timing input regarding reliability, and correction by lower level input can be further corrected by higher level input.

4. The system as claimed in claim 1, wherein further has: fifth function, which calculates ratio of physical time period from previous correction to current correction against physical time period from previous correction to physical time of internal music time of corrected point, then modifies duration times thereafter in the second data memory by multiplied by the ratio, when correction happened.

5. The system as claimed in claim 1, wherein further has: sixth function, which records and stores modified duration times reflects the correction by the fourth function, and later the system can use said recorded and stored data as data of the second data memory.

6. The system as claimed in claim 5, wherein user can select options of the sixth function from recording by overwrite in the second data memory, recording to other memory, and non-recording.

7. Compound system comprising plural systems claimed in claim 1 and displaying mixture of same or different music scores, wherein a master system has the second data memory and the first function and the other slave systems display each music score with the first data memory, the second function and the third function in each system, the master system delivers its internal music time to all other slave systems.
8. Compound system comprising plural systems claimed in claim 1 and displaying mixture of same or different music scores, wherein each system has: seventh function, which transforms between music time and page and position in display in both directions, and when a user points on position in music score in an initiating system, the system gets music time from the position by the seventh function and transmits the music time to other systems, the other systems obtain page and position in display at the system from the music time by the seventh function and displays the music score at obtained page and a pointer at the obtained position as the same position the user points at the initiating system.
9. Computer readable media including duration time data in the second data memory corresponding to a music piece, said duration time data is made by or made and duplicated later by the system claimed in claim 5.
10. The system as claimed in claim 1, wherein setting of the music time for renewal in the function 3 is in such way that

music time for renewal of partition in upper half of display is selected from music time corresponding to note or rest in playing partitions lower enough from the center of display field, so that upper half of page display changes during playing point is located from said lower enough partition to the end of page,

and music time for renewal of partition in lower half of display is selected from music time corresponding to note or rest in playing partitions upper enough from the center of display field, so that lower half of page display changes during playing point is located from the top of page to said upper enough partition,

as a result, there is enough time period of displaying whole page; during playing point is located from said upper enough partition to said lower enough partition.